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AUTHOR Yaden, David B., Jr.
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ABSTRACT

A study investigated the kinds of questions children ask as they encounter written language. Data were gathered over a 7-month period for two boys, one approximately 4, the other approximately 2 years of age. Two types of observation sessions were used: formal story reading times that were audiorecorded, and informal situations where the children's questions about print in the environment were noted in a log. Analysis of data revealed that the two children spontaneously inquired about the sounds and meanings of words, the content of stories, and the actions and motivations of characters in the stories. Questions about characters constituted the largest category for both children, comprising about 30% of the older boy's and 70% of the younger one's questions. Neither child asked consistently about the sounds or names of letters. Overall, the findings indicate that even at age 2, children ask a variety of specific questions about print. These results support previous research suggesting that story book reading is a highly effective channel of information for a child. The results further indicate that reading teachers should not restrict children's opportunities to ask questions about written language. (Sample log sheets and excerpts from transcripts of formal observations are appended.) (FL)

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A Categorization of Two Children's Questions About Print as They Learn to Read: A Case Study

David B. Yaden, Jr.

College of Education

University of Oklahoma

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Address correspondence to

David B. Yaden, Jr.
Coordinator, Reading Improvement Center
College of Education
University of Oklahoma
820 Van Vleet Oval
Norman, Oklahoma 73071

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Abstract

One consistent finding of studies of early readers has been that children's questions about print are of great importance in the child's learning to read. In Durkin's (1966) studies of early readers in New York and California, she noted that "most of the parental help which led to a child's early reading ability was given in response to the child's questions and requests for assistance" (p. 135). And in one of the more recent, comprehensive study of early readers, Clark (1976) found that one of the common characteristics across intelligence, home background and socio-economic level was having " an interested adult who talked and listened to them" (p. 102). One purpose of the present, ongoing study has been to categorize and note the proportion of the various kinds of questions that two children have spontaneously and voluntarily asked as they have been exposed to books and print in the surrounding environment. The investigation has been conducted as an exploratory case study with the experimenter's two boys: David, age three years, eight months and Jon-Marc, age 21 months at the study's inception. Data have been summarized between the period of August 10, 1981 and February 29, 1982. There have been two types of observation sessions: formal story-reading times which are audio-recorded and typescripted afterwards and informal situations where the children's questions about print in the environment are recorded in a daily log. Cumulative frequencies for all question categories are tabulated each month and percentages obtained. For the intial period of data collection, it can be definitely stated that these two children spontaneously inquire about the sounds and meanings of words, the content of stories and the actions and motivations of characters. In the present sample, questions about characters constitute the largest category for both boys, comprising approximate 30% of the oldest's questions and 70% of the younger's. The next largest categories for the older boy are questions about the speech representation of single printed words, literal and inferential meaning in stories and the oral equivalent of multiple word arrays. Neither child has asked consistently about the sounds or names of letters. In summary, the present study of children's questions indicates that even as young as two, children ask a variety of specific questions about print. This evidence supports in part the suggestion by Ninio and Bruner (1978) that story book reading, in particular, is a highly effective channel of information for the child. One implication for beginning reading instruction is that situations in which children are restricted from asking questions on their own about aspects of written language will not enhance reading acquisition.

A Categorization of Two Children's Questions About Print As They Learn to Read: A Case Study

One consistent finding of studies of early readers has been that children's questions about print are of great importance in the child's learning to read. In Durkin's (1966) seminal studies of early readers in New York and California she noted that "most of the parental help which led to a child's early reading ability was given in response to the child's questions and requests for assistance" (p. 135). In a study of twenty children who read before first grade, Plessas and Oakes (1964) reported that "the entire group of early readers gave attention to signs on trips and asked questions about words, letters and numbers" (p. 245). Again, Teale (1978) in summarizing a number of studies dealing with the types of environment that foster early reading, mentions that in addition to having people who would read to the child, "these people performed another important function; they answered the questions that the child asked about reading" (p. 929). And in one of the more recent, comprehensive study of early readers, Clark (1976) found that one of the common characteristics across intelligence, home background and socio-economic level was having "an interested adult who talked and listened to them" and who was willing "to answer their questions" (p. 102).

While it is a consistent finding that most early readers spontaneously inquire aobut various aspects of print, the types of questions predominantly asked are less frequently documented or only generally specified. In one of the earliest studies of gifted children, Termon (1918) reported of a 26 month old girl who "whenever she came to a

word she didn't know she said, "What's that?" (p. 219). This question is substantiated by the father as the only one the girl ever asked about the process of reading or decoding unfamiliar words. Witty and Coomer (1955) record that the parents of two gifted twin boys state that their sons learned to read at age three "simply by asking questions and by having their questions answered" (p. 107). No mention is made in the article, however, about the content of the questions. Krippner (1963) examined a four year old who at eighteen months "looked at a bottle of medicine and said, 'V-I-C-K-S spells Vicks.'" and states that not only did the boy ask his parents to read the captions in a picture dictionary, but "began to notice numbers, letters and words in his environment and requested that they be identified" (p. 105). Similarly, Price (1976) surveyed the parents of thirty-seven gifted children and found that "the six who learned incidentally [to read] were reported by parents to be very persistent in asking the names of letters and words" (p. 45).

Persistent questioning behavior about aspects of print has not been merely characteristic of children with above average intelligence however. In Durkin's (1966) studies, I. Q.'s ranged from 91 to 161 in the California study and from 82 to 170 in the New York investigation; yet, almost all the parents reported giving their children help with the sounds and names of letters, meanings of words and writing as a result of the child's questions (p. 163). In addition, Torrey's (1973) subject, John, who was reading before age five, was of normal intelligence having a full scale I. Q. of 104 as measured by the WPPSI. Lass (1982), as well, has not suspected her own preschooler to be of "outstanding ability" although the youngster has been quite precocious in "raising questions about the names of letters, numbers and words" (p. 22).

If there has been any documentable tendency for early readers of both normal and gifted intelligence to ask questions about any one dimension of written language more than another, it seems to be toward aspects of words or larger language units and their meanings. In a study of 134 kindergartners, Sutton (1964) found that 82 percent of the children who were reading before first grade had been "in the habit of asking questions about words" (p. 237), according to information supplied by the parents. Typical questions which Sutton (1964) noted during the kindergarten program were inquiries like "What does this say?" and "Where does it say 'Dick and Jane'?" (p. 234). More recently Stine (1980) has reported that for a sample of five-year olds observed over a six-month period "seventy-three percent of all questions spontaneously asked by the children concerned whole words rather than letters" (p. 147). Further, both Soderbergh (1976) and White (1954) have reported the overwhelming tendency of their own children to be concerned about the meanings of words as related to their own experience. And Soderbergh (1976) has even recorded a child inquiring as to the legitimacy of certain phrases by asking, "Can you say: 'the flower is crying'?" and "Can you say: 'the flower is dancing...'?" (p. 271).

Even so, smaller units of written language do not go unnoticed. The present writer, for instance, has observed preschoolers inquiring about quotation marks situated in the acknowledgements after a movie and that, for one three-year old, the "V" could be distinguished form the "P" because the former had a "slant" and a "point."

These examples seem to demonstrate the sensitivity of children to a great range of printed stimuli from the smallest detail of punctuation to what Soderberg (1976) has termed "metalanguage" in which children "talk

about the meanings of words to make explicit their linguistic systems" (p. 268).

Thus, while descriptive research evidence indicates that children ask questions about the sounds and names of letters, about what words "say" and what they mean and about the way sentences can be expressed, it is less obvious what proportion of each type of inquiry is found within the range of questions asked by any one child, or group of children for that matter, and which type, if any, is predominant. Piaget (1974) has said, "If we knew approximately in the case of each individual the proportion of one type of speech to another, we should be in possession of psychological data of great interest" (p. 25). Similarly, it was this writer's feeling that equally illuminating insights might be made into the process of learning to read if by children's questions it could be detected what aspects of printed language are most salient to them at different stages in their reading development.

Definition of the Problem

One purpose of the present, ongoing study, therefore, has been to categorize and note the proportions of the various kinds of questions that two children have spontaneously asked as they are being exposed to written language. There have been few systematic attempts to do this kind of analysis of which the writer knows, although some researchers (e.g., Durkin, 1966; Soderbergh, 1976; White, 1954) have noted reoccurring kinds of inquiry and Stine (1980) has reported a percentage for questions asked about words alone.

However, for insights into the psychological process of beginning reading, more refined analysis of the natureof the quesitons is needed.

For example, a child asking, "What does this (a word) say?" may be primarily requesting auditory information; whereas a child inquiring, "Where does it say hippopotamus?" may be searching for essentially visual information, having already in mind the auditory image. Given the recent postulate by Otto (1982) that the "Great Debate" in reading has now shifted from between teaching methodologies to between "top-down" (meaning-oriented) and "bottom-up" (sound-driven) models of the reading process, information as to the specific foci of children as revealed by their questions while being exposed to written language may provide the empirical data from which sound conclusions may be drawn to support one of the models or, perhaps, neither.

After gleaning the literature of early readers for types of questions that children have asked and further postulating questions that children could ask based upon the structure of current theoretical models, the author posited categories and subcategories of children's inquiries about various forms of print designed to answer the following questions posed by the study:

1. What proportion of children's questions are designed to give them information about the names, sounds, and shapes of letters?

2. What proportion of children's questions are directed at discovering the names or function of punctuation marks?

3. What proportion of children's questions are aimed at gaining graphic, syntactic and semantic information about words, phrases or sentences?

4. What proportion of children's questions deal with the difference between "book language" and their own speech?

5. What proportion of children's questions explore the reality of what is read to them and the reality of which they are acquainted?

6. What proportion of children's questions are attempts to get information about pictures and illustrations in books or about other pictorial representations in the environment where there is accompanying print?

The author is well aware that the above questions do not hardly exhaust the range of inquiry that exposure to print is sure to elicit from most children, nor may the taxonomy of children's questions shortly to be defined constitute even an adequate description of the current questions which have been cataloged. Nevertheless, however limited or imprecise, the following descriptions of the spontaneous inquiries about the nature of visual language are at least a start in gaining further insight into the processes of beginning reading, this time from the child's point of reference.

METHODS

Design and Sample

The investigation has been conducted as an exploratory case study with the experimenter's own two children: David, age three years, eight months, and Jon-Marc, age 21 months at the study's inception. While this might seem too tender an age to expect any reliable progress in reading, previous case study research (e.g., Anderson, 1978; Fowler, 1962; Lass, 1982; Soderbergh, 1976; White, 1954) has shown that children between the ages of thirteen months and three and a half years are probably the most receptive to initial reading instruction.

In addition, Harste, Burke and Woodward (Note 1) have compiled extensive empirical data showing that even three year olds possess a quite sophisticated knowledge of written language when ecologically unobtrusive data gathering methods are used. Their findings have generally been corroborated by others (e.g., Goodman and Altwerger, Note 2; Hill, 1980) using similar methods.

Part of the problem in assessing the characteristics of early readers and early reading behavior is that the researcher is almost solely restricted to relying on the recollections of parents and, in some cases, the early readers themselves several years later (Kasdon, 1958).

Torrey (1979), on the other hand, in reference to her own work with early readers has said that

> If we were to take seriously the problem of discovering the "natural" method of learning to read, we would have to spend more time and effort observing what children actually do. We would have to focus on their spontaneous behavior in free

> situations and less upon their response to our pre-determined questions. (p. 135)

There has been general lack of "hard data" in the form of questions that children actually ask although parents recall that they do ask many questions. While Soderbergh (1976), White (1954) and Sutton (1964) have given more specific descriptions of certain types of questions, the intent was to point out a general kind, not catalog occurrences of it.

Another problem arises when an "outsider" attempts to observe the child in his home setting. Torrey (1973) found that her child simply refused to read at length to her and even records a written request for her to "Get out" when asked to read aloud. Smith (1976) also reported on a brief study with a child of four and a half who also was uncooperative when asked to do certain tasks. Harste, Burke and Woodward (Note 1) report an interesting encounter in which a child, age 9, when asked by the researchers to read the word Ban printed on a stop sign, responded, "I'll bet that says 'stop' in German or something. That's just the kind of junk you'd carry around to pull out and ask young, unsuspecting kids about!" While Smith (1976) rationalized that the uncooperative behavior was illuminating for other reasons, what is demonstrated is the difficulty of an outside experimenter coming in and establishing a relationship with the child that is unobtrusive enough to allow the child to act without suspicion.

A third difficulty in describing early readers has been that by the time the experimenter examines them and inquires about their behavior, the children have already learned to read and many of the critical phases of reading development can only be inferred from questionnaires of parents. Although Durkin's (1966) investigations are considered to be the most

thorough, all of her subjects were chosen on the basis that they already knew how to read. Similarly, Clark's (1976) longitudinal studies of early readers in Scotland over a four year period began after the children were identified as readers. While there are extant studies in which children were observed as they were learning to read (e.g., Fowler, 1962; Past, A., 1976; Past, K., 1976; Soderbergh, 1976; White, 1954), they were conducted primarily to explore the efficacy of certain methods of teaching and children's vocabulary growth. With the exception of Soderbergh (1976) who deals with some aspects of children's questions, the others do not address the child's questioning with any regularity.

In consideration of overcoming these problems, the case study approach was chosen. First, rather than rely upon second-hand observations and even less reliable recollections over time, the study allows for on-the-spot observation and systematic recording of all occurrences of questions, particularly in tape-recorded sessions. In addition, due to the nature of the relationship with the children, the experimenter has been able to observe the subjects in many informal situations to which only parents have access.

Secondly, the difficulty of the outside observer will be eliminated since the subjects are the writer's own children. However, the experimenter is not unaware of the problems inherent to this arrangement. Fowler (1962), in speaking of the method used with his own daughter, mentions some of these difficulties.

> The loss of generality of the findings by the use of one case and the experimenter's bias were balanced by the depth, flexibility, and ease of handling in exploration which could be maintained with one child. In particular, the closeness of the

> relationship of E to S provided a unique, longterm situation for the intimate and relatively detailed observations on many phases of the child's life. (p. 193)

The strength of the case study is that it preserves the "intimacy" of the natural, home situation or what Louis Smith calls the "boundedness" of the system being observed (cited in Stake, 1980). In other words, all the complexities of social and interpersonal interactions with which the subject is familiar are allowed to operate, thus allowing for a more realistic observation of the subject's response to everyday occurrences. Donaldson (1979), in criticism of Piaget, has commented upon the "situatedness" of the experimental task which greatly determines the child's response. The more unfamiliar the task or the experimenter is to the child, the less reliable will the child's response be. And Carey (1980), in discussing "naturalistic vs. empirical" research methods in reading suggests that naturalistic methods can provide

> relevant outcomes and the most powerful explanatory variables . . . by the collection of data--again, to the extent possible--in real world situations . . . and by paying attention to observation and description. In this fashion, a researcher can at least attempt to preserve the complexity of the phenomena observed. (p. 414)

Thus by focusing on the children's "spontaneous behavior in free situations" the present case study as defined hoped to capture some of the aspects of early reading behavior as yet unobserved.

The third difficulty mentioned, that a great number of studies of early reading behavior have been carried out "ex post facto," has been eliminated since both the subjects are at ages where reading development

is at the very nascent stages. Some research has indicated (e.g., Anderson, 1978) that an optimal age of beginning reading instruction may be around two years old. Thus the ages of the subjects at the beginning of the study, three years, eight months and 21 months, provided an opportunity to observe a child in the very earliest prereading stages as well as a child who had acquired a beginning orientation to print and the process of reading, but who was not yet able to identify words from a printed page.

As to differences between "qualitative" and "quantitative" research designs, Rist (1977) has pointed out that "what appears more realistic is to assume that different methodological approaches are appropriate for different levels of analysis and different levels of abstraction" (p. 47). One specific advantage of the case study, according to Festinger and Katz (1965), is that it "tends to continue over a period of time, so that it is possible to maintain continued observation" (p. 81-82). Continued observation in the present study is a necessity in order to detect possible patterns of questions over time.

Recently, some researchers in reading (e.g., Ehri, 1979; Mason, 1980) have hypothesized that there is a pattern of print awareness which begins to develop at a very early age. Therefore the appropriateness of a case study of children's questions is demonstrated in that it provides for a lengthy observation period as well as systematic, regular data collection of occurrences of questions which may or may not point to any patterns of inquiry.

Procedures

The observation period began August 10, 1981 and data are summarized through February 29, 1982. There have been two types of observation sessions: formal and informal. The formal sessions have been held with each individual child on the average of two to three times a week for approximately fifteen to thirty minutes and are tape-recorded and typescripted. The reason for holding them separately is that the experimenter has noticed that during times of reading, the younger boy is much more animated and vocal about pointing to the pictures and expressing his feelings. This somewhat disrupts the reading session for the older boy. Therefore, in order to give each boy a chance to interact at his own level during the storytime, the sessions have been held at different times for each. Initially, the sessions were to be held sometime between the conclusion of the evening meal and the boys' bedtime usually a couple of hours later. They have not been limited to this time, however, as several of the sessions have taken place after the noon meal before naptime. Fowler (1962) noted that his daughter's receptivity to the reading sessions varied somewhat with her physical and emotional states depending upon sickness and the activities of the day; thus, the time of the instructional period varied from mid-morning, afternoon to early evening. The present experimenter-father has closely monitored the children's moods, therefore, and has changed the times of the sessions as is necessary to maintain the children's interest and avoid any obvious fatigue.

The method of reading during the formal sessions has taken the form of "assisted reading" described by Hoskisson (1974). "Assisted reading," according to the author,

is based on the premise that initially children need to see the graphic shapes of words, hear them pronounced, and follow their patterning in sentences that contain enough syntactic and semantic context for them to relate their experiences and conceptual knowledge to the material being read. (p. 298)

Hoskisson specifically describes assisted reading as a way parents can begin to develop reading habits in their children without "resorting to more formal methods" (p. 298). Below is an abbreviated description of the method.

1. Read many easy children's books to the child.
2. Read with the child three or four times a week.
3. Limit the reading time to the amount of time the child is interested, usually 20 minutes or less. Make the reading time pleasant.
4. Have the child read words, phrases, or sentences as they are read aloud. Do this initially with one or two pages of a book and gradually increase the number of pages as interest increases.
5. Read many books by means of assisted reading. Interest is increased by reading widely.
7. When the child is ready to do the major portion of the reading, the parent supplies those words which are new to the child or which the child has trouble remembering.
8. The child should be involved in selecting the books that are read and those which will be read with parental assistance. (Hoskisson, 1974, p. 299)

The writer has not followed the steps of the method rigorously since the method of teaching is not the direct focus under study nor is the overall reading achievement of the children. The guidelines have been used to stimulate the children's interest in reading and expose them to a wide variety of reading material. The broad parameters of assisted reading allow the child a great deal of freedom, especially in the initial stages of the method, for interests to wander over a great many aspects of printed language without compulsion to focus upon any one thing. In the eyes of the experimenter, this is exactly the type of reading behavior that is desired if one is to find out the range of questions that the child will spontaneously ask.

Informal observations have taken place any other time that the experimenter has observed the children asking questions about occurrances of print in the environment. The children have continued regular routines of going to the library, to grocery and department stores, and accompanying their parents on various other errands around town. It is important to mention that no attempt has been made at any time to elicit questions from the children either during the formal or informal observation times. All questions documented have been voluntarily and freely asked by both boys.

Data Collection

All of the formal reading sessions with each child have been recorded on cassette tape. Recording the story reading sessions has allowed for an uninterrupted time of reading, talking and asking questions. However, the experimenter has jotted down the tape footage as measured by the tape counter at the occurrence of a question, thus eliminating having to listen to the entire tape again trying to locate questions asked. After the

sessions, the experimenter prepares a typescript (see Appendix A) of the portions of the tape where the questions occurred in addition to any pertinent descriptions of pictures or text which prompted the question.

Record of the informal observations have been kept in a daily log (see Appendix B). Occurrences of questions about print in the environment are recorded by noting the child inquiring, the time of the question and any description of environment which prompted the inquiry. The experimenter has purposely carried 3 X 5 cards with him anytime that he and the children are away from home. Observations made outside the home are rewritten in the daily log preferably the same day.

At the time of the transcriptions, each question from each child has been numbered consecutively so as to keep a running, cumulative total of the questions asked. In addition, a category designation has been assigned to each question according to the question categories as defined. Also, the children's ages by year, month and week are carefully noted in the daily log as well as from the recording sessions in order to detect any patterns of questions which might be a function of age.

Definition of question categories.

The following criteria for each question category was originally established on the basis of exampler of children's question which have been incidentally reported in the literature. However, since children's questions about reading have not been systematically studied, some categories of questions have no extant, published examples. In these cases, the researcher has used examples of questions that the children have already asked or has relied upon inferences made by investigators in published research about what children seem to be focusing upon in print as a basis for establishing a separate category.

The categories as defined are by no means expected to be exhaustive or inclusive. Since the beginning of the study in August of 1981, sub-categories, Ia, Ie, VIa, VIIb and all of category VIII have been added to accomodate questions not originally posited. Otherwise, the categories listed have served remarkably well in classifying the collected inquiries.

Category I. Questions about letters.

Ia. Graphic array - inquiries about the general configuration of letters as opposed to the distinctive features of letters. (e.g., "Where's the D for David?").

Ib. Name - questions where the child asks for the name of the letter.

Ic. Sound - questions like "What does that letter say?" or "What sound does that letter make?"

Id. Shape - questions about ascenders, descenders, vowel shapes or any other visual feature about single letters not in words as "The V has a slant and a point, doesn't it?" (David, Summer 1981).

Ie. Function - questions such as "What are those two X's doing?" (David, October 1981).

Category II. Questions about punctuation.

IIa. Name - questions directed at finding out the names of periods, quotation marks, commas, semicolons, exclamation points and question marks, e.g., "What is that little dot?" (David, October 1981).

IIb. Purpose - questions asking about what punctuation marks "do" or "say." (e.g., "What does it [the little dot] do?").

Category III. Questions about single words.

IIIa. Graphic array - questions about ascenders, descenders or other visual features including overall configuration. Questions where the visual form is the focus of the inquiry as opposed to the pronunciation such as "Does this say please?" (David, September 1981).

IIIb. Sound - questions like "What does that word say?" where the pronunciation of a visual form is requested.

← IIIc. Structure - Questions having to do with the identification of words based on a recognition of syllables or morphemic units. (In comparing the words truck and trucking, David said, "This word is truck, isn't it? Because it doesn't have a /iŋ / Sumer 1981).

← IIId. Meaning - questions about the meaning of words, e.g., "What's a galley?" (White, 1954) and "What does that mean when lions are cross?"

Category IV. Questions about sentences or phrases.

IVa. Graphic array - quesitons about the visual form of a multiple word display (e.g., "Where does it say 'Dick and Jane'?", Sutton, 1964).

IVb. Sound - questions where the pronunciation of a multiple word display is requested (e.g., "What does that sign say?").

IVc. Syntax - questions about the ordering of words in a sentence.

IVd. Meaning - questions exploring the meaning of sentences or semantic relationships between words in sentences or

phrases (e.g., "Can you say: 'The flower is pushing the baby-carriage'?", Soderbergh, 1976, p. 271).

Category V. Questions about the difference between "book language" and child speech.

Va. Difference - both Soderbergh (1976) and White (1954) mention instances of "transposed speech" where the child makes corrections in the text to fit his/her own speech.

Category VI. Questions about book reality vs. child reality.

VIa. Meaning - questions asking for an explanation or elaboration of story events.

VIb. Incongruence - White (1954) records her child asking about incidences in books trying to "square a book with her own experience" (p. 144).

VIc. Veracity - a late development that White (1954) noticed were questions about "true and untrue" stories (p. 188) Distinguished from VIa. in that the child is concerned about real-life occurences of the book incidences and not just it being different from their own experience.

Category VII. Questions about pictures and illustrations.

VIIa. Characters - these are questions where a child points to a character in a book or illustration and inquires as to what that character is "saying" or "doing." Sutton also notes that children often want to know what the character's names are.

VIIb. Objects and Events - questions directed at inanimate objects. (e.g., "What's that stuff that's floating?").

Category VIII. Questions about books.

VIIIa. Authorship - inquiries into how books come into existance. (e.g., "Is that the man who wrote this book?").

VIIIb. Genre - questions about differences between the structure and content of various kinds of books.

VIIIc. History - questions about characteristics of books which make them "old" (e.g., "Why is it an old book?").

The categories as defined are by no means meant to be exhaustive or ~~inclusive~~ Complete. As it has become necessary to add major or subcategories of questions due to occurances of inquiries not already defined, the experimenter has done so accordingly.

Data Interpretation and Analysis.

Since the outset of the study, four major objectives have been uppermost. The first has been to obtain a corpus of documentable evidence that children do spontaneously ask questions about print as formerly reported in retrospective, parental interviews (e.g., Clark, 1976; Durkin, 1966; Price, 1976; Sutton, 1964). Secondly, from a methodological standpoint, it has been a purpose to establish the efficacy of the question categories as presently defined. Thirdly, it has also been a purpose to discover whether or not certain types of questions are a function of age. And finally, it has been hoped that an empirical data base might be acquired that will provide a foundation from which meaningful, theoretical interpretations of the processes of beginning reading might be made.

In order to begin answering the questions posed by the study, analysis of the data has followed a form similar to that used by Piaget (1974) in classifying the speech of children (see Appendix C). Cumulative

percentages have been computed for each month of data collection in each major and subcategory. Also summary tables have been constructed to cover the entire period from August to February for both boys. As the data becomes more complex and indicative of patterns or different between the two boys or between question categories, additional statistical analyses will be appropriately performed. At this point, however, summary percentages have sufficed for the initial purposes of the study.

Results

While the present results have been summarized over a period of approximately 29 weeks, thus giving a longitudinal perspective, other than informal data gathered in September and October, the formal tapping sessions for the four year old occurred during two weeks in August, the entire month of January and approximately three weeks in February for a total of seven running hours of tape. For the two year old the taping sessions were approximately the same in August and January and cover two weeks in February for a total of four running hours. During the interim from September to December, the experimenter-father was immersed in preparing for the general exmainations, teaching eight hours of classes and taking nine hours additionally to finish his own coursework; thus the additional time and preparation necessary to record and typescript the formal sessions was not undertaken. However, as will be seen, even the relatively condensed data gathering period during the first six months of the study is indicative of persistent questioning by the children over several aspects of the printed page.

During the initial taping in August summarized by Table 1, David asked a total of 34 questions: 45% being request about single words, 30% being requests for information concerning illustrations, 15% exploring the meaning of the story line, 9% being inquiries about multiple words and approximately 1% of the questions were about letters.

Insert Table 1 About Here

The largest single subcategory (IIIb), accounting for nearly one-quarter of the total questions asked, is the request to hear single words pronounced. As shown in Table 2, this inquiry is typically phrased,

"What's that say?" or What's that word say?" while he points to the particular letter cluster in focus. Subcategory IIIa, Graphic Array, differs in that the child knows the pronunciation but wants to see the written form such as "Where does it say play, Dad?" (See Appendix D). Subcategory IIId involves requests for the meaning of words as "What's mangoes?" and "What's a bay?"

Insert Table 2 About Here

The second largest category, Questions About Illustrations (VII), is comprised by two closely related groups of questions, one about characters, both animal and human, and the other (VIIb) about inanimate objects. Questions about characters normally take the form of "What is he/she saying?" or "What is he doing?". Inquiries about the labels of objects vary depending upon the item under scrutiny, i.e., "What are those little things?" and "What's this stuff that's floating?". (The objects under focus were snowflakes.)

Originally category VI, Questions About Book Reality, was meant to explore incongruities between the story content and the child's experience. However as indicated in Table 3, it became obvious that David in many cases was not in disagreement with the story, but rather was seeking information and further explanation about the story events. It is very interesting that four of the five questions in this category (VIa) are the same inquiry asked on four separate occasions about a particular part of one of David's favorite books. Burt Dow, an old fisherman, gets his cod hook stuck in a whale's tail. After removing it, he puts a bandaid over the hole which causes all the other whales to want bandaids as well. Hence, David's question, "Why did they all wanted (sic) a bandaid?". Despite my response, David insisted that all of the whales

must have had holes in their tails. We have since read this book several times and the question has not arisen since.

Insert Table 3 About Here

During August only one question about letters was asked: "Where's the D for David?". Graphic Array (Ia) has been distinguished from Shape (Id) since on an earlier occasion in July of 1981 before the tapings began, David referred to the "slant" and "point" which distinguished the "V" from the "U". Graphic Array is meant to be a more global category including requests concerning general configuration, while Shape will subsume queries with narrower referents, i.e., "slant" and "point."

Table 4 summarizes two informal occasions in September and October, one taking place in the boys' bedroom and the other in a university restaurant. Again, requests for pronunciation (IIIb) of single words comprises the largest single subcategory (38%) with its companion subcategory (IVb) for sentences and phrases totaling 31%. Total percentages of questions for each major category are Questions about Sentences/Phrases (IV), 39%; Questions About Single Words (III), 38%; Questions About Punctuation (II), 16%, and only 3% of the questions were about letters. New categories being filled at this time are for punctuation (IIa and IIb), letters (Ie) and sentences (VIa).

Insert Table 4 About Here

The questions concerning the written form of multiple words (IVa) came while David and the experimenter were eating lunch in one of the university's restaurants. At selected booths were little signs stapled to the top of the backrests which read:

PLEASE

NO SMOKING

AT THIS TABLE.

At one point during lunch, David asked, "Does this say, please?" while running his finger underneath "At this table." Other questions during this time were inquiries asking for the pronunciation of single words or phrases while pointing to the particular letter configurations such as "What does this sign say?" or "What does this say?" (pointing to the word Beverages on the menu).

Questions regarding letters (Ie) and punctuation (IIa and IIb) were documented during one period just before bedtime. The questions came in rapid succession and are reproduced in Table 5. They were directed at deciphering a group of words on the side of a cardboard box underneath one of the boy's beds.

Insert Table 5 About Here

It should be noted that the absence of questions about meanings is characteristic of informal sessions which usually do not deal with books. Questions during non-story book reading tend to focus more on aspects of sound/letter correspondence.

Insert Table 6 About Here

Tables 6 and 7 summarize questions during January and February of 1982. In both months, questions eliciting information about characters (VIIa) comprised the largest percentages, 36% and 69%, respectively. Inquiries about the meanings of story events (VIa) comprised the second largest total percentage in January (32%) with questions about single words being the third largest category (20%). In February, category IV, Questions About Sentences/Phrases, is the second largest (16%) and behind

Questions About Book Reality and Questions About Books (VIII) each contain one question a piece.

Insert Table 7 About Here

Of questions not previously described, those about books are least well-defined. The question about authorship is relatively straight-forward as reproduced below:

D: "What does this say?" (Pointing to the end of a banner where the author's name is written.)

F: "That's his name, Colin McNaughton."

D: "Is that the man who wrote this book?"

F: "Yes, it is."

The other question, categorized under History (VIIIc) is only a tentative posit. The dialogue is below.

D: "Dad, this is a very old book."

F: "It is an old book."

D: "Why is it?"

The book in appearance is tattered, being one of my wife's childhood treasures. The question may be an attempt to seek confirmation for his initial impressions of the book. There are several questions of this kind which are rhetorical asked by each boy and usually answered by them shortly afterward.

Insert Table 8 About Here

Table 8 summarizes all of David's questions during formal and informal sessions from August 10, 1981 to February 20, 1982. As far as major categories are concerned, Questions About Illustrations (VII) comprise the largest percentage (34)x followed by Questions About Single Words (III), (29), Category VI, Questions About Book Reality (16),

Questions About Sentences/Phrases (IV-13), and categories I, II, and VIII (2% each). A descending ranking of selected subcategories shows the percentage of inquiries about characters to be first (28), followed by questions about single word sound (17), the written form of sentences and phrases (16), multiple word pronunciation (11) and single word meaning (7). A general statement which can be made about David at this point is that he has been most interested in gaining information about characters actions during stories as well as inquiring about the meaning of story events. In addition, he has shown a great interest in pointing out single words as well as phrases and asking what they "say."

Insert Table 9 About Here

Summaries for the younger brother, Jon-Marc, show fewer, but no less interesting questions. As indicated in Table 9, during the month of August all of Jon-Marc's requests for information were about characters and objects in illustrations. As reproduced in Table 10, these questions first took the form of the utterance "dees" which he would repeat until I had identified the particular character or object under scrutiny. After labelling occurred, a common response would be "Oh." In order to insure that "dees" was indeed a request for information the experimenter purposely did not respond on one particular occasion to see what would happen. After a dozen or so "deeses" with no response from the writer, Jon-Marc became very animated and repeated the request more fervently (See Appendix E). After I responded, he was satisfied and stopped the request. Further confirmation for "dees" being a request for information came during the sessions in January in which Jon-Marc still pointed to characters and objects in stories, but the questions were now phrased, "What's dis?" or "What's that?" (See Appendix F).

Insert Table 10 About Here

The summary for January as shown in Table 11 notes a wider array of questions. Although questions about illustrations still constitutes 71% of the total inquiries, information was requested concerning letters, words, sentences and story meaning. Questions concerning the pronunciation of single and multiple words (IIIb and IVb) were recorded during one session in late January. The dialogue is reprinted below:

Insert Table 11 About Here

JM: "What's this? What's that say?" (Pointing to a sign in the picture)

F: "It says, No sliding head first or upside down."

JM: "What's that say?" (Pointing to a sign on a storefront in the picture.)

F: "It says, Easy Way Hardware Store."

JM: "That say?" (Pointing to a sign on a theater)

F: "That says, Movies."

The question concerning sentence/phrase meaning came as a response to a written text about zebras fleeing from lions and is reproduced below and in Table 12.

Text: "The herd then gallops away to escape danger."

JM: "Escape danger?" (rising intonation)

F: "Escape danger. That means that they get away." (No further response.)

Insert Table 12 About Here

Since the formal taping sessions are held separately, it cannot be said that Jon-Marc, age 2 years, 3 months at this point, is mimicing his older brother's quesitoning behavior. Rather, the fact that his questions are similar to David's and dispersed across the same general range seems

to indicate that children as young as two are developing specific "hypotheses," as it were, about written language and actively seeking to gain information and confirmation of these developing notions.

Table 13 summarizes the period from August 11, 1981 to February 29, 1982 for Jon-Marc. Like David, questions about illustrations constitute the largest proportion of inquiries, 82% in this case. Since the other categories, however, contain only one or two entries, it is impossible to note a trend of any kind. Interestingly, categories IIIb and IVb both deal with requests for pronunciation while categories IVd and VIa include requests for meaning. This it could be said that in addition to requesting information concerning characters and objects in illustrations, Jon-Marc was also interested in hearing letter clusters pronounced and in gaining understanding about story events and words.

Insert Table 13 About Here

Discussion

At the outset of the study, it was determined to collect "on-the-spot" evidence exploring the notion that preschool children do indeed ask many questions about print (Clark, 1976; Durkin, 1966) and to develop a theoretically meaningful system within which the inquiries might be described. While the investigation is still in its nascent stages, longitudinally speaking, the first question of "Do children spontaneously ask questions about written language?" can be answered definitively for the subjects studied. And although more data needs to be collected to further solidify the questions categories, the initial system posited has

been remarkably successful in adequately describing the on-going inquiries by the children.

In the two most comprehensive studies of early readers to date (Clark, 1976; Durkin, 1966), evidence is provided by retrospective parental report that children frequently ask questions about letters, words and numerals. For the two cases studied, questions about words far outweigh queries about letters, and as yet, no questions about numbers have been observed. The present evidence also indicates that questions concerning words can be further discerned as being directed at gaining different kinds of information. One dimension describes when the child has a letter cluster in focus and asks to hear its verbal representation. Another situation occurs when the child utters the verbal form and asks to see the written symbols. Finally, there is the request for word meaning. Interestingly, the evidence from which the writer posited the category of Structure (IIIc) came before the study officially began. David pointed out the difference between trucking and truck because of the /ing/. Since that time, however, no inquiries have been directed at gaining such information about words.

The present study also offers evidence for the suggestion that children will spontaneously ask questions about sound-letter correspondence without prompting by an adult (Forester, 1977; Hoskisson, 1979). It was one specific purpose of the study to not prompt the children to focus on any specific aspect of the printed page, but merely to answer their questions when asked. Thus for the subjects studied, it can be said that spontaneous questions about very specific aspects of the written language occur at an average rate of 3-4 questions per formal reading session. At this rate, hypothetically, it would be possible for a

child who is read to regularly during early childhood and given the chance to interact, to ask questions literally into the thousands about various dimensions of the reading act. Given such a case, which I believe is anything but far-fetched, it should be no mystery why some children come to school with considerable knowledge about reading without ever having had formal instruction.

Unfortunately, that early readers comprise a relatively small proportion of beginning school children may not be due to the children's lack of seeking information, but rather to a parental style of reading story books which is ironically patterned on instructional interaction in the school. Teale (1981) describes studies by Heath (1980) in which children at age three are suddenly no longer allowed to freely participate in the story reading event as they had been for the first couple of years. At three, Teale writes, they are "expected to listen to the story, learn from the information contained in the material and remember the content so that it can be conveyed to the adult in queistioning following the reading" (Teale, 1981, p. 11). Given this type of "initiation-reply-evaluating" structure characteristic of classroom lessons (Mehan, 1979), Heath (1980) reported that children who come from homes which are not oriented to providing school-like experiences suffer in achieving literacy more than children from "mainstream" homes. Yet, it can be posited that the initiation-reply-evaluation sequence might be deleterious to all children and that even though middle-class children have less trouble learning to read than lower class children as a rule, that is not to say that reading acquisition could not occur earlier if youngsters would be allowed to freely participate in the story-book

reading event both at home and at school, rather than only respond to adult-oriented questions for the entirety of their school lives.

Another area which the present investigation sheds light upon, although indirectly, is that of print awareness. Since Reid's (1966) study showing that her subjects confused letters with numbers, letters with words and "writing" with "drawing," several researchers (Downing, 1970, 1973-74, Holden and MacGinitie, 1972; Mickish, 1974; Ryan, McNamara and Kenney, 1977) have suggested that young children are relatively unsophisticated in segmenting written words, spoken sentences, matching spoken language with written letter clusters and are almost totally devoid of concepts of punctuation. However, the four year old in this study, even at three and a half, by pointing to single words as well as more than one word, seemed to have a notion of written word boundaries. In regard to punctuation, David has asked specifically about the name and function of the period and before the study began inquired about the quotation marks he saw during the acknowledgements after a movie. While this does not prove that he has a functional knowledge of word boundaries or conventions of punctuation, it demonstrates that concepts of print are developing early on. It may be also that any investigator-induced measure of print awareness will always yield a less than adequate picture of the child's genuine ability. Donaldson (1979) has given a good account of how the amount of "situatedness" in an experimental setting determines how well children are able to perform Piagetian tasks. In essence, knowledge which seems to be lacking as measured by one task often emerges in a more familiar setting for the child.

Conclusion

In summary, the present, on-going study of children's questions indicates that even as young as age two, children ask a variety of specific questions about printed language during both story reading times and other periods when they are exposed to occurrences of print in the environment. This evidence supports in part the suggestion by Bruner and Ninio (1978) that story book reading, in particular, is a highly effective channel of information between child and interlocuter. The investigation also provides support for the claim by proponents of "natural" reading (Forester, 1977; Hoskisson, 1979; McKenzie, 1977) that children will spontaneously ask questions about print if allowed to interact with meaningful written material.

One implication for beginning reading instruction is that situations in which children are restricted from asking questions on their own about aspects of written language will not enhance reading acquisition. As noted by Heath (1980), lack of an opportunity to continue to freely participate in story-book reading at home may contribute to the difficulty in achieving literacy for some groups of children not oriented to a school-like environment. There is reason to believe, however, that all children would benefit from a program in which their questions were encouraged and where thoughtful, prompt answers to those questions were continuously supplied.

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NAME: David
AGE: 3/8 to
PERIOD: Aug. 10-25, 1981 (1-3)[a]

TAPE TIME: 4 hrs min
No. of SESSIONS: 7
AVE. TIME PER SES: 34.3 m

CATEGORY	INFORMAL	FORMAL	TOTAL
I. Questions about letters			
a. Graphic Array		1	1 (3)[b]
b. Name			
c. Sound			
d. Shape			
e. Function			
II. Questions about punctuation			
a. Name			
b. Purpose			
III. Questions about single words			
a. Graphic Array	2	2	4 (12)
b. Sound	5	3	8 (24)
c. Structure			
d. Meaning		3	3 (9)
IV. Questions about sentences/phrases			
a. Graphic Array			
b. Sound	2	1	3 (9)
c. Syntax			
d. Meaning			
V. Questions about book language			
VI. Questions about book reality			
a. Meaning		5	5 (15)
b. Incongruence			
c. Veracity			
VII. Questions about illustrations			
a. Characters		6	6 (18)
b. Objects and events		4	4 (12)
VIII. Questions about books			
a. Authorship			
b. Genre			
c. History			
Total	9	25	34

[a] Indicates consecutive weeks of study.

[b] Indicates percentage of total questions.

FORMAL SESSION TYPESCRIPT

Name: David
Age: 3 yr 8 mo 2 wk
Date: 8-20-81

Tape No.: D-3 Side: 2
Week: 2 (Aug. 17-23)
Time: 8:00 p.m.

Footage	No.	Description of Text/questions	Cat.	Comments
		Book: Kellog, S. The Mystery of the Flying Orange Pumpkin. New York: The Dial Press, 1980. Summary: A grouchy, old man won't let a group of children get their pumpkin which they planted for Halloween. They decide to play a trick on him.		
290		Illustration: The cover of the book is black with the title in orange half-inch high letters.		
	18	"What's, what's that word?" (pointing to 'The' on the cover.)	IIIb	Father: "The." David: "The, the, /th/ (sounding it out."
	19	"What's that word say, Dad?" (pointing to 'Mystery' on the cover.) David: "There's 'the' again." (pointing to "The Flying . . ."	IIIb	Father: "Mystery." David seems to know that a word is bounded spaces and to be able to distinguish one word from many. This is only a guess at this point
	20	"What's that word say, Dad?" (pointing to 'of.')	IIIb	
	21	"What does all this word say?" (runs his finger under the words of the title.)	IVb	He is much better at spontaneously demonstrating print awareness, than responding to questions about what is a word and what isn't.

Table 3
FORMAL SESSION TYPESCRIPT

Name: David
Age: 3 yr 8 mo 3 wk
Date: 8-25-81

Tape No.: D-4 Side: 2
Week: 3 (Aug. 24-30)
Time: 8:15 p.m.

Footage	No.	Description of Text/questions	Cat.	Comments
		Book: McCloskey, R. Burt Dow: Deep-Water Man. New York: Viking Press, 1963. Illustration: A line of whales with their tails in the air and Burt putting a band-aid on each one. Text: Burt knew right off that his troubles were over.		
356	23	"Why did they all wanted a band-aid?" Father: "Because if one whale has a band-aid, they all want a band-aid." David: "Maybe they all . . . all had a hole in 'em."	VIa	
397		Text: Then he cranked the make-and-break engine, clackety-BANG . . . and headed the Tidely-Idely back up the bay.		
	25	"What's a 'bay'?"	IIId	

NAME: David
AGE: 3/9 to 3/10
PERIOD: Sept. 18 and Oct. 8, 81

TAPE TIME: hrs min
No. of SESSIONS:
AVE. TIME PER SES:

CATEGORY	INFORMAL	FORMAL	TOTAL
I. Questions about letters			
a. Graphic Array			
b. Name			
c. Sound			
d. Shape			
e. Function	1 (8)		
II. Questions about punctuation			
a. Name	1 (8)		
b. Purpose	1 (8)		
III. Questions about single words			
a. Graphic Array			
b. Sound	5 (38)		
c. Structure			
d. Meaning			
IV. Questions about sentences/phrases			
a. Graphic Array	1 (8)		
b. Sound	4 (31)		
c. Syntax			
d. Meaning			
V. Questions about book language			
VI. Questions about book reality			
a. Meaning			
b. Incongruence			
c. Veracity			
VII. Questions about illustrations			
a. Characters			
b. Objects and events			
VIII. Questions about books			
a. Authorship			
b. Genre			
c. History			
Total	13		13

Name: David
Age: 3 yr 10 mo wk
Date: October 8, 1981

Hours/min. obs.: 15 minutes
Time: 9:30 p.m.
Week: 9 (Oct. 5-11)

Child	No.	Description of situation/questions	Cat.	Comments
		In David's and Jon-Marc's bedroom, sitting on the bed. Across the room, under Jon-Marc's bed, was a box with these words written on the side: xerox reusable carton XEROX. paper		
David	18	"Dad, what are those two 'X's' doing and the 'E-R-O'?"	Ie	New category: Function of letters.
David	19	"What does that word say underneath 'Zeerox'?"	IIIb	
David	20	"What does it say on top?"	IVb	Referring to more than one word.
David	21	"What is that little dot?"	IIa	
David	22	"What does it do?"	IIb	

NAME: David
AGE: 4/2 to
PERIOD: Jan. 2-31 (21-25) 82

TAPE TIME: 2 hrs 10 min
No. of SESSIONS: 11
AVE. TIME PER SES: 11.8 m

CATEGORY	INFORMAL	FORMAL	TOTAL
I. Questions about letters			
a. Graphic Array			
b. Name			
c. Sound			
d. Shape			
e. Function			
II. Questions about punctuation			
a. Name			
b. Purpose			
III. Questions about single words			
a. Graphic Array			
b. Sound		1 (5)	
c. Structure			
d. Meaning		3 (14)	
IV. Questions about sentences/phrases			
a. Graphic Array			
b. Sound		1 (5)	
c. Syntax			
d. Meaning			
V. Questions about book language			
VI. Questions about book reality			
a. Meaning		7 (32)	
b. Incongruence			
c. Veracity			
VII. Questions about illustrations			
a. Characters		8 (36)	
b. Objects and events		1 (5)	
VIII. Questions about books			
a. Authorship			
b. Genre			
c. History		1 (5)	
Total		22	22

Table 7
SUMMARY

Children's Questions
45

NAME: David
AGE: 4/2/2 to
PERIOD: Feb. 2-20, 1982 (26-28)

TAPE TIME: hrs 50 min
No. of SESSIONS: 6
AVE. TIME PER SES: 8.3 m

CATEGORY	INFORMAL	FORMAL	TOTAL
I. Questions about letters			
a. Graphic Array			
b. Name			
c. Sound			
d. Shape			
e. Function			
II. Questions about punctuation			
a. Name			
b. Purpose			
III. Questions about single words			
a. Graphic Array			
b. Sound			
c. Structure			
d. Meaning			
IV. Questions about sentences/phrases			
a. Graphic Array			
b. Sound		1 (8)	
c. Syntax			
d. Meaning		1 (8)	
V. Questions about book language			
VI. Questions about book reality			
a. Meaning		1 (8)	
b. Incongruence			
c. Veracity			
VII. Questions about illustrations			
a. Characters		9 (69)	
b. Objects and events			
VIII. Questions about books			
a. Authorship		1 (8)	
b. Genre			
c. History			
Total		13	13

NAME: David
AGE: 3/8 to 4/2
PERIOD: 8/10/81 to 2/20/82 (1-28)

TAPE TIME: 7 hrs min
No. of SESSIONS: 24
AVE. TIME PER SES: 17.5 m

CATEGORY	INFORMAL	FORMAL	TOTAL
I. Questions about letters			
a. Graphic Array		1	1 (1)
b. Name			
c. Sound			
d. Shape			
e. Function	1		1 (1)
II. Questions about punctuation			
a. Name	1		1 (1)
b. Purpose	1		1 (1)
III. Questions about single words			
a. Graphic Array	2	2	4 (5)
b. Sound	10	4	14 (17)
c. Structure			
d. Meaning		6	6 (7)
IV. Questions about sentences/phrases			
a. Graphic Array	1		1 (1)
b. Sound	6	3	9 (11)
c. Syntax			
d. Meaning		1	1 (1)
V. Questions about book language			
VI. Questions about book reality			
a. Meaning		13	13 (16)
b. Incongruence			
c. Veracity			
VII. Questions about illustrations			
a. Characters		23	23 (28)
b. Objects and events		5	5 (6)
VIII. Questions about books			
a. Authorship		1	1 (1)
b. Genre			
c. History		1	1 (1)
Total	22	60	82

NAME: Jon-Marc
AGE: 1/9 to
PERIOD: Aug. 11-23, 1981 (1-2)

TAPE TIME: 1 hrs 15 min
No. of SESSIONS: 4
AVE. TIME PER SES: 18.75 m

CATEGORY	INFORMAL	FORMAL	TOTAL
I. Questions about letters			
a. Graphic Array			
b. Name			
c. Sound			
d. Shape			
e. Function			
II. Questions about punctuation			
a. Name			
b. Purpose			
III. Questions about single words			
a. Graphic Array			
b. Sound			
c. Structure			
d. Meaning			
IV. Questions about sentences/phrases			
a. Graphic Array			
b. Sound			
c. Syntax			
d. Meaning			
V. Questions about book language			
VI. Questions about book reality			
a. Meaning			
b. Incongruence			
c. Veracity			
VII. Questions about illustrations			
a. Characters		9 (69)	
b. Objects and events		4 (31)	
VIII. Questions about books			
a. Authorship			
b. Genre			
c. History			
Total	_____	_____	_____
		13	

FORMAL SESSION TYPESCRIPT

Name: Jon-Marc Tape No.: JM-2 Side: 1
Age: 1 yr 9 mo 3 wk Week: 2 (Aug. 11-17)
Date: Aug. 23, 1981 Time: 9:00 p.m.

Footage	No.	Description of Text/questions	Cat.	Comments
		Book: Piper, W. (Ed.). Mother Goose. New York: Platt & Munk, 1972.		
29	1	"Dees, dees, dees, dees." (pointing to the squirrelsin the picture.)	VIIa	This is a new type of behavior which has emerged in the last two weeks. Jon-Marc points to characters and says something like, "Dees." I'm presuming at this point that the question is something along the lines of "what is this." This is perhaps making more out of holophrases than is necessary but the pattern is constant.
67		Illustration of children playing in an attic dressed in adults' clothes.		
	3	"Dees!" (pointing at a purse that a little girl is holding.) Father: "That's a purse." Jon-Marc "Oh."	VIIb	
97		Illustration of a boy in a nightgown jumping over a candlestick.		
	4	"Dees, dees, dees." (pointing to the boy.)	VIIa	
142		Illustration: Jack and Jill are tumbling down the hill.)		
	8	"Dees, dees." (pointing to a bucket which is flying out of the boy's hand.) Father: "That's a bucket." Jon-Marc: "Oh."	VIIb	

NAME: Jon-Marc
AGE: 2/3 to
PERIOD: 12/31/81 - 1/30/82 (21-25)

TAPE TIME: 1 hrs 48 min
No. of SESSIONS: 9
AVE. TIME PER SES: 12 m

CATEGORY	INFORMAL	FORMAL	TOTAL
I. Questions about letters			
a. Graphic Array			
b. Name			
c. Sound			
d. Shape			
e. Function		1 (4)	
II. Questions about punctuation			
a. Name			
b. Purpose			
III. Questions about single words			
a. Graphic Array			
b. Sound		2 (8)	
c. Structure			
d. Meaning			
IV. Questions about sentences/phrases			
a. Graphic Array			
b. Sound		2 (8)	
c. Syntax			
d. Meaning		1 (4)	
V. Questions about book language			
VI. Questions about book reality			
a. Meaning		1 (4)	
b. Incongruence			
c. Veracity			
VII. Questions about illustrations			
a. Characters		13 (54)	
b. Objects and events		4 (17)	
VIII. Questions about books			
a. Authorship			
b. Genre			
c. History			
Total		24	

FORMAL SESSION TYPESCRIPT

Name: Jon-Marc
Age: 2 yr 2 mo 3 wk
Date: Jan. 24, 1982

Tape No.: JM-4 Side: 1(1)
Week: 24 (Jan. 18-24)
Time: 8:30 p.m.

Footage	No.	Description of Text/questions	Cat.	Comments
		Book: Venino, S. Amazing Animal Groups. National Geographic, 81.		
45		Text: The herd then gallops away to escape danger. (illustration of a herd of zebras scampering out of a watering hole.)		
	23	"Escape danger?"	IVd	From Jon-Marc this is the first such inquiry that I've noted. Judging by the quizzical look on his face, I'm assuming that the phrase "escape danger" posed an unfamiliar situation in regards to the herd of zebra.
		Father: "Escape danger. That means that they get away." No further response.		
76		Text: A parade of penguins heads down to the ocean to fish for food. Illustration of a line of penguins walking down an ice flow to the water.		
	24	"Where's the ocean?"	VIIb	
		After my response that the ocean was a long ways away, Jon-Marc said, "Here's the ocean, that's an ocean." (pointing to the water in the picture.)		David also asks questions that he has an answer for. This seems to confirm Bruner's notion and others that children take over the adult role in the dialogue as the questioner as well as continuing in the role of answering.

Table 13
SUMMARY

Children's Questions
51

NAME: Jon-Marc
AGE: 1/9/3 to 2/4
PERIOD: 8/11/81 - 2/29/82 (1-29)

TAPE TIME: 3 hrs 45 min
No. of SESSIONS: 16
AVE. TIME PER SES: 14 m

CATEGORY	INFORMAL	FORMAL	TOTAL
I. Questions about letters			
a. Graphic Array			
b. Name			
c. Sound			
d. Shape			
e. Function		1	1 (3)
II. Questions about punctuation			
a. Name			
b. Purpose			
III. Questions about single words			
a. Graphic Array			
b. Sound		2	2 (5)
c. Structure			
d. Meaning			
IV. Questions about sentences/phrases			
a. Graphic Array			
b. Sound		2	2 (5)
c. Syntax			
d. Meaning		1	1 (3)
V. Questions about book language			
VI. Questions about book reality			
a. Meaning		1	1 (3)
b. Incongruence			
c. Veracity			
VII. Questions about illustrations			
a. Characters		23	23 (61)
b. Objects and events		8	8 (21)
VIII. Questions about books			
a. Authorship			
b. Genre			
c. History			
Total		38	38

FORMAL SESSION TYPESCRIPT

Name:_____ Tape No.:_____Side:____

Age:___yr___mo___wk Week:_____

Date:_____ Time:_____

Footage	No.	Description of Text/questions	Cat.	Comments

Table B
DAILY LOG

Name:_____ Hours/min. obs.:_____

Age:____yr____mo____wk Time:_____

Date:_____ Week:_____

Child	No.	Description of situation/questions	Cat.	Comments

NAME:_____ TAPE TIME:___ hrs ___ min

AGE:_____ to _____ No. of SESSIONS:_____

PERIOD:_____ AVE. TIME PER SES:_____

CATEGORY	INFORMAL	FORMAL	TOTAL
I. Questions about letters			
a. Graphic Array			
b. Name			
c. Sound			
d. Shape			
e. Function			
II. Questions about punctuation			
a. Name			
b. Purpose			
III. Questions about single words			
a. Graphic Array			
b. Sound			
c. Structure			
d. Meaning			
IV. Questions about sentences/phrases			
a. Graphic Array			
b. Sound			
c. Syntax			
d. Meaning			
V. Questions about book language			
VI. Questions about book reality			
a. Meaning			
b. Incongruence			
c. Veracity			
VII. Questions about illustrations			
a. Characters			
b. Objects and events			
VIII. Questions about books			
a. Authorship			
b. Genre			
c. History			
Total	____	____	____

Name: David
Age: 3 yr 8 mo 1 wk
Date: Aug. 11, 1981

Hours/min. obs.: 3 hrs.
Time: 6:00 - 9:00 p.m.
Week: 2 (Aug. 11-17)

Child	No.	Description of situation/questions	Cat.	Comments
Jon-Marc		While I was talking on the phone, Jon-Marc came running up to me holding a wooden block in each hand with the capital "R's" showing. He was saying, "Two R's, two R's!"		
David	1	Pointing to the tape recorder at the beginning of a reading session.		
		"Where does it say 'play'?"	IIIa	
		I pointed to the word underneath the button.		
David	2	"Right here?" (runs his finger underneath the word.)	IIIa	
		Points again to the tape recorder and the button under which "RWD" is written.		
David	3	"What does this say, 'R-W-D'?" (spells out the three letters.)	IIIb	

FORMAL SESSION TYPESCRIPT

Name: Jon-Marc
Age: 1 yr 9 mo 3 wk
Date: Aug. 23, 1981

Tape No.: JM-2 Side: 1
Week: 3 (Aug. 18-24)
Time: 9:00 p.m.

Footage	No.	Description of Text/questions	Cat.	Comments
		Book: Mother Goose.		
		Illustration: Two young people, a boy and girl, standing next to one another. The young boy has his face close to the girl's and looks like he is saying something.		
153	9	"Dees, dees, dees, dees . . . dees, (repeatedly).	VIIa	I purposely did not respond to see if the response was really a request for information. Apparently, it is.
		Father: "That's a boy and he's talking to a girl.		
211		Illustration of Humpty Dumpty falling off the wall.		
		"Dees, dees, dees, dees." (pointing to the falling egg.)	VIIa	
		Father: "That's Humpty Dumpty."		
		Jon-Marc: "Boy-boy-bumpy."		

FORMAL SESSION TYPESCRIPT

Name: Jon-Marc
Age: 2 yr 2 mo 1 wk
Date: Dec. 31, 1981

Tape No.: JM-3 Side: 1
Week: 21 (Dec. 28-Jan. 3)
Time: 12:30 p.m.

Footage	No.	Description of Text/questions	Cat.	Comments
		Book: Albert G. Miller. Bambi Gets Lost. Random House, 1941.		
2		Illustration: Animated picture of of forest full of animals inside the front cover of the book.		
	14	"What's dis?" (pointing to the raccoon.) Father: "That's a raccoon."	VIIa	
	15	"What's dis bird's name?"	VIIa	
178		Illustration of a frog halfway submerged on a lily pad. Text: On top of a lily pad almost unseen, Sat something quite lumpy and shiny and green.		
	16	"Uh oh, uh oh, what happened?" (pointing to the frog in the water.)	VIa	
	17	"Look at dis!" "What's that?" (pointing to a dragonfly over the frog's head.) Father: "That's a dragonfly."	VIIa	